

08/823744

REAL-TIME, MULTI-POINT, MULTI-SPEED, MULTI-STREAM SCALABLE COMPUTER NETWORK COMMUNICATIONS SYSTEM

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ABSTRACT OF THE DISCLOSURE

An improved networked computer communications system handles arbitrary streams of data, and transports at varying speeds those streams where intermediate updates can be dropped if they are obsoleted by later arriving data updates, optimizing the utilization of network and node resources. Complex buffering by system server software allows distributed, parallel, or redundant processing, transmission, and storage for performance, reliability, and robustness. Various parameters of the system can be monitored, and the system can be reconfigured automatically based on the observations. Varied techniques reduce the perceived end-to-end latency and take advantage of software and hardware capabilities that assets connected to the system may possess. One conferencing system allows conference participants to share all or a portion of the display seen on their computer screens. The conferees may be at sites removed from each other, or may view a recorded presentation or archived conference at different times. Conference participants are either "presenters" who can modify the display or "attendees" who cannot modify the display. A pointer icon, which can be labeled to identify the conferee, is displayed on the shared image area. Each conferee can modify the position of his or her own pointer, even when not presenting, so that every participant can see what each conferee is pointing to, should a conferee choose to point to an element of the display. These and other features apply to other data streams shared in the conference or in meetings where there is no shared-image data stream.